

**MILITARY COMPENSATION
IN THE AGE OF TWO-INCOME
HOUSEHOLDS:**

**ADDING SPOUSES' EARNINGS TO THE
COMPENSATION POLICY MIX**

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*The views expressed in this paper represent those of the author
and are not necessarily those of the Department of Defense.*

INTRODUCTION

Heretofore, analyses of military compensation have addressed only the employment and compensation conditions confronting uniformed service members. The following analysis examines the effect of military service on the employment and earnings of civilian spouses in military households. It explores the experiences of civilian spouses in the labor market so that policies can be formulated to reflect the economic conditions facing military households.

By incorporating an appreciation for the relationship between military service and civilian spouse earnings, the effective scope of compensation policy can be expanded. Specifically, to the extent that unique conditions of military life impose a wage and employment penalty on spouses of military personnel, compensatory policies can improve these earnings and thus the lot of military households. Moreover, this approach may engender policy alternatives that increase military household income at a substantially lower national expense than could be achieved through compensatory increases in military pay.

This analysis first addresses the relevance of civilian spouse earnings to discussions of military compensation and explores the degree to which military service impinges upon the employment and earnings outcomes of spouses of military personnel. It then outlines a range of policy measures tailored to address unique employment and earnings challenges that may confront spouses of military personnel.

SCOPE OF ANALYSIS

While the analysis that follows addresses spouse earnings and employment outcomes from the perspective of wives, it is equally applicable to husbands of female service members. Wives are the focus on this analysis because males make up 85 percent of military personnel. Due to higher rates of marriage among male service members, wives constitute 93 percent of civilian spouses.¹ This situation imposes analytic constraints. Specifically, male spouses of female military personnel represent too small a population in available survey data to analyze the wage and employment outcomes of husbands of female military personnel.

¹ Based upon February 2001 Defense Manpower Data Center marital statistics.

THE EFFECT OF MILITARY SERVICE ON WIVES' EARNINGS

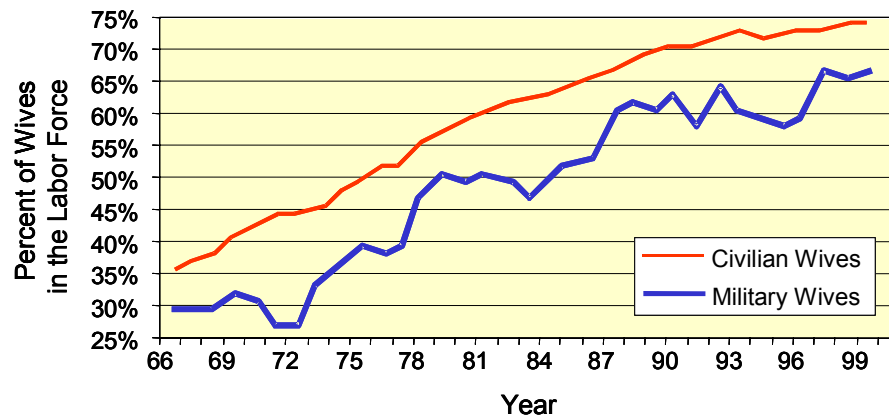
Current formulations of military pay have their genesis in the Gorham Report on military compensation. This report was prepared at the request of Secretary of Defense McNamara in 1962. In its review of military compensation, the Gorham Commission noted that all service members were entitled to basic pay, the basic allowance for quarters, and the basic allowance for subsistence. Taken as a whole, these pays and allowances and their attendant tax advantage were combined by the Commission into "regular military compensation" (RMC) as a metric for comparing civilian and military earnings.² Since 1962, with minor adjustments, RMC has served as the conceptual framework within which military compensation policy has evolved. Based upon labor market conditions existent in 1962, RMC was at that time a reasonable basis for assessing pay comparability and adjusting military compensation.

At the time of the Gorham Commission, single income households were the norm. In the civilian sector, male earnings were the predominant source of household income. Similarly, distinctions between soldier earnings and military household earnings could pass without notice. Indeed, high rates of female labor participation and earnings are a fairly recent phenomenon; today's senior uniformed leaders entered the military services in which the preponderance of wives labored within the home or as volunteers. However, dual income households have now become the norm in both civilian and military households. Since the time of the Gorham Commission, the rate of labor force participation among wives has more than doubled so that over 75 percent of wives in civilian households now work or are seeking work outside the home.³ Paralleling this striking trend, the rate of labor force participation among wives of military personnel now exceeds 65 percent, as is illustrated in Figure 1.

² The basic allowance for subsistence (BAS) and basic allowance for quarters (BAQ) are paid to soldiers as allowances rather than income and are thus tax free.

³ March 1999 Supplement to the Current Population Survey (CPS) for wives of husbands age 20 to 49.

Figure 1. Labor Force Participation Among Wives with Civilian or Military Husbands Age 20 through 49

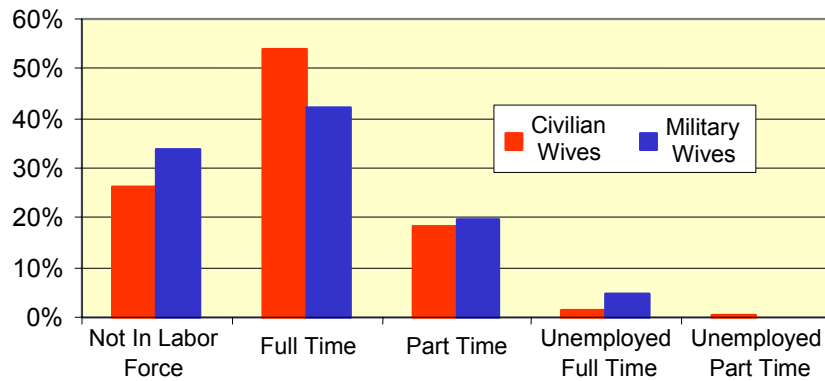


Data Source: March Supplements to Current Population Survey

Statistics based on labor force participation measure the rate at which Americans work or seek to work outside the home. Labor force status, on the other hand, differentiates between employment outcomes – employment (full-time or part-time) and unemployment (those -seeking full-or part-time employment).

Figure 2 shows the differences in labor force status between wives in civilian and military households in 1999. As already depicted in Figure 1, the wives of military personnel were somewhat less likely to be in the labor force than were civilian wives—a difference of about 10 percentage points. Among those in the labor force, however, the unemployment rate of wives of military personnel was about four times higher than that reported for wives of civilians. Between these bounds, full-time and part-time employment follows somewhat disparate patterns. Forty-two percent of military wives were employed full time while 20 percent worked part time. In contrast, 53 percent of wives of civilians worked full time while 18 percent worked part time.

Figure 2. March 1999 Labor Force Status of Wives During the Previous Year Within Traditional Civilian and Military Households (wives of husbands age 20 through 43)



Data Source: March 1999 Supplement to Current Population Survey

MILITARY WIVES' RETURN ON HUMAN CAPITAL

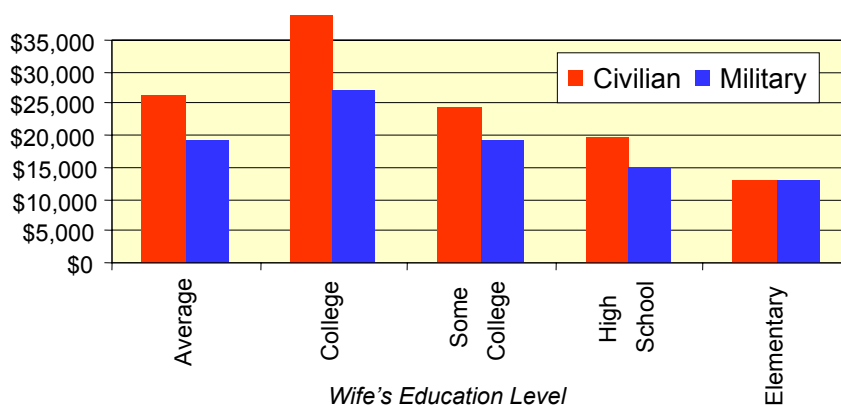
Not only are military wives who seek work less likely to find it but data on annual earnings, as presented in Figure 3, suggests a systemic military wage penalty. Specifically, among those working full time, a \$7,000 margin separates the average wage earnings of wives in civilian and military households. Importantly, this disparity increases with educational level from near-wage-parity among wives with only an elementary education to almost a \$12,000 gap for those with a college degree.

Thus, the wage gap between civilian wives and military wives is 24 to 30 percent for wives who are high-school through college graduates. While the earnings levels provided in Figure 3 do not control for factors such as hours worked, they demonstrate a linkage between military service and lower earnings for spouses.

MOVING BEYOND DESCRIPTIVE ANALYSIS

Many factors can shape employment and earnings levels. Among wives, these include factors that affect labor market participation as well as factors such as human capital and labor expenditure.

**Figure 3. Average Annual Earnings of Wives Working Full Time in 1998
(wives of husbands age 20 through 48)**

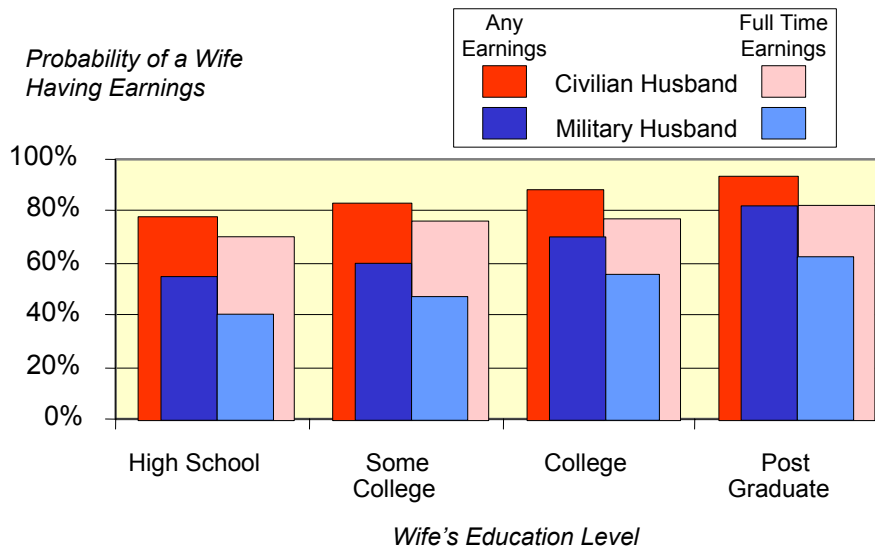


Data Source: March 1999 Supplement to the Current Population Survey.

With regard to labor market participation, the presence of young children in a family can increase the cost of working outside the home since such work will entail childcare expenses. If these expenses are sufficiently high, or prevailing wages are sufficiently low, work outside the home can become a losing proposition. Similarly, the presence of older children can require that a parent be available to drive to and from school and to after-school activities, thus limiting how far an individual is willing to commute between home and work and circumscribing commuting to high-wage areas. Additionally, husbands' current earnings and potential lifetime earnings, as represented by their education level, affect their wives' labor force participation. When husbands' earnings are relatively high, wives may be less likely to exhibit high levels of labor force participation holding other factors constant.

Moving beyond descriptive analyses and controlling for the aforementioned factors using multivariate statistical techniques, one finds that wives of military personnel are much less likely to have earnings from either full-time or part-time employment. Indeed, military wives exhibit far less likelihood of part-time or full-time employment than do their contemporaries married to civilians, holding other relevant factors constant. This situation is illustrated in Figure 4. For example, in the case of a wife with a post-graduate degree, marriage to a service member, rather than a civilian, lowers the wife's probability of full-time employment from 80 to 61 percent.

Figure 4. Employment Outcomes, Military and Civilian Wives (probit simulation results for wives with husbands age 20 to 50)

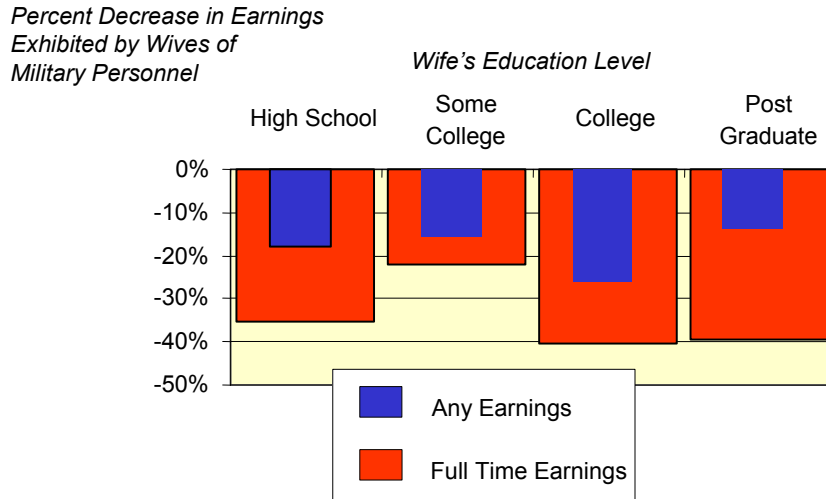


Data Source: 1993, 1995, 1997 and 1999 March Supplements to the Current Population Surveys.

For wives who are working, wages are affected by factors such as accumulation of specific and nonspecific human capital. Typically, specific human capital, accumulated through work experience on a job, yields higher productivity and wages. Similarly, higher levels of nonspecific human capital, as represented by educational attainment, correspond to higher wage levels. From a theoretic perspective, these higher wages are due to the extent to which human capital contributes to and signals higher labor productivity. Of course, labor expenditure—as represented by the number of weeks worked per year—also underpins annual wages.

Controlling for these factors, and those shaping wives' labor force participation decisions, a substantial wage penalty exists among military wives working full time or part time. For example, as indicated above, a wife with a post-graduate degree will, on average, earn some 40 percent less in full time wages than if she were married to a non-military husband. Given the distribution of educational attainment found among wives of military personnel, the situation exhibited in Figure 5 yields an average wage penalty of some 30 percent among wives of military personnel, after controlling for relevant factors. This figure is comparable quite well to the wage penalty exhibited in Figure 3.

Figure 5. Earnings Penalty Exhibited by Wives of Military Personnel (by wife's education level, holding other factors constant)



Data Source: 1983, 1995, 1997, and 1999 March Supplements to the Current Population Surveys.

Note: Assumes 1.2 percent measurement error in weeks worked.

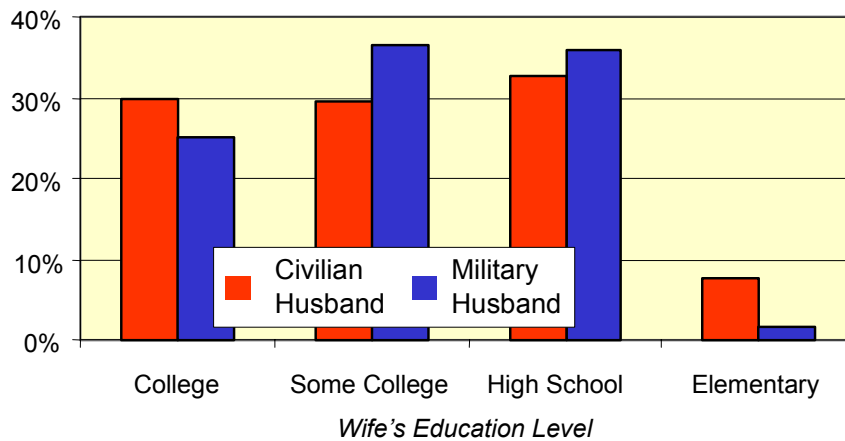
EDUCATIONAL ATTAINMENT OF MILITARY WIVES

Although there appears to be wage parity between military and civilian wives with only an elementary level education (as shown in Figure 3), Figure 6 indicates that almost all wives of military personnel fall within higher education levels where they receive lower earnings than reported by their civilian contemporaries. Indeed, for education levels below a bachelor's degree, wives of military personnel have higher educational attainment than do wives of civilians.

Of course, a confluence of human nature and military personnel policy virtually ensures that wives of military personnel will be a relatively well-educated group. Specifically, with regard to educational attainment, "likes" tend to marry "likes." Indeed, the correlation between the amount of education attained by husbands and wives approaches 66 percent. Educational attainment is a consideration in both accession and career progression decisions in the military Services. By extension, therefore, the spouses of military personnel will be a relatively educated population. Since accession and career progression standards are likely to increase in

tandem with the intellectual demands imposed by today's information-based warfare, it is unlikely that the educational attainment of military wives will decline. Rather, the opposite is far more likely.

Figure 6. Education Levels of Wives of Husbands Age 20 through 43



Data Source: March 1999 Supplement to the Current Population Survey

MILITARY HOUSEHOLD FORMATION

From a compensation policy perspective, the potential value of raising military household income by reducing any wage penalty among wives of military personnel depends on two important factors. These factors are the magnitude of any such penalty and the prevalence of marriage among military personnel. Whereas the foregoing section established the existence and the magnitude of the penalty, this section briefly addresses household formation within the military. Figures 7 and 8 show the extent to which marriage is a dominant trait of the career force.

Figure 7. Marital Status of Male Enlisted Personnel by Branch of Service, December 2000

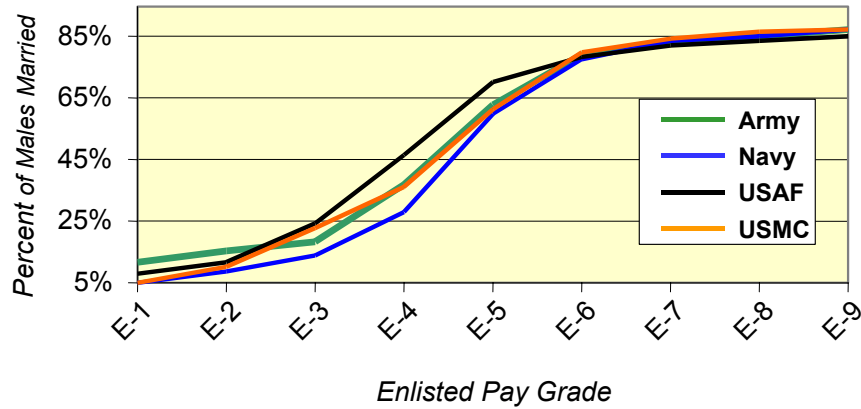
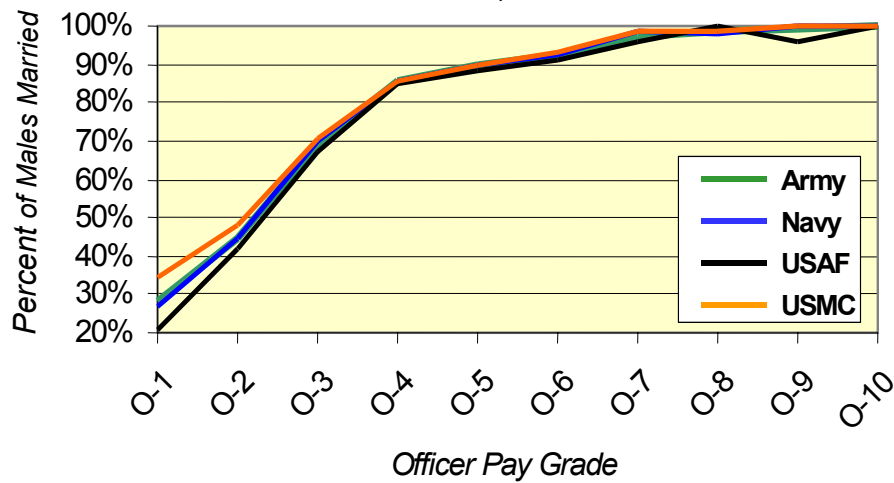


Figure 8. Marital Status of Male Officers by Branch of Service, December 2000



Data Source: Defense Manpower Data Center

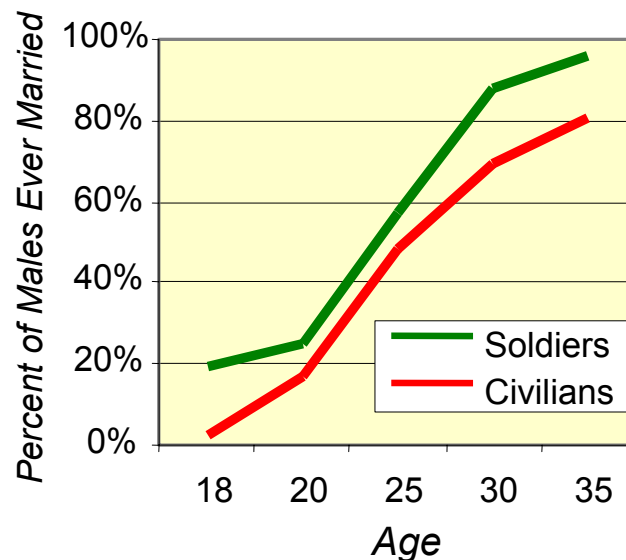
Looking across services and pay grades, two important patterns emerge with regard to marital rates among male service members. First, the percent of married males increases dramatically as males complete their initial term of service. This pattern holds across enlisted and officer ranks. At its basis, this trend is temporal in nature in that marriage is an early life-course event. Consequently, the prevalence of any wage penalty among spouses will be an increasing function of service member

longevity. Therefore, any such wage penalty will bear most heavily upon the career force.

Second, marital rates exhibit low variability across services. That is, high rates of household formation are a Department-of-Defense-wide phenomenon and are not service-specific.

Comparing the marital rates of servicemen and typical civilian males is also instructive. For example, as indicated in Figure 9, Army soldiers exhibit higher marital rates than do their civilian counterparts. Indeed, at any given age, service members are far more likely to be married than are their civilian peers.

Figure 9. *Marital Status of Civilian Males and Male Soldiers Age 18 to 35 (ever married as of March 1999)*



Data Source: Current Population Survey, Army Enlisted Master File, and Dependent Eligibility Entitlement System

The current conditions and policies relevant to marriage by service members should be contrasted to those existent at the time of the Gorham Commission. Prior to the inception of the All-Volunteer Force, soldiers needed their commander's permission to marry. At the same time, relatively low military pay did not provide junior personnel the resources to set up housekeeping. Furthermore, the military services engaged in practices that were likely to have depressed the labor force participation of military wives. Until the early 1980s, for example, commanders continued

to make reference to wives' community and volunteer activities in their husbands' efficiency (evaluation) reports. Today, however, the military services make a substantial investment in married personnel. This investment takes the form of family housing, increased allowances for off-post housing, medical care for wives, and increased weight and dislocation allowances for transfers between stations. Military personnel now face considerably lower financial barriers to household formation.

THE IMPACT OF MIGRATION

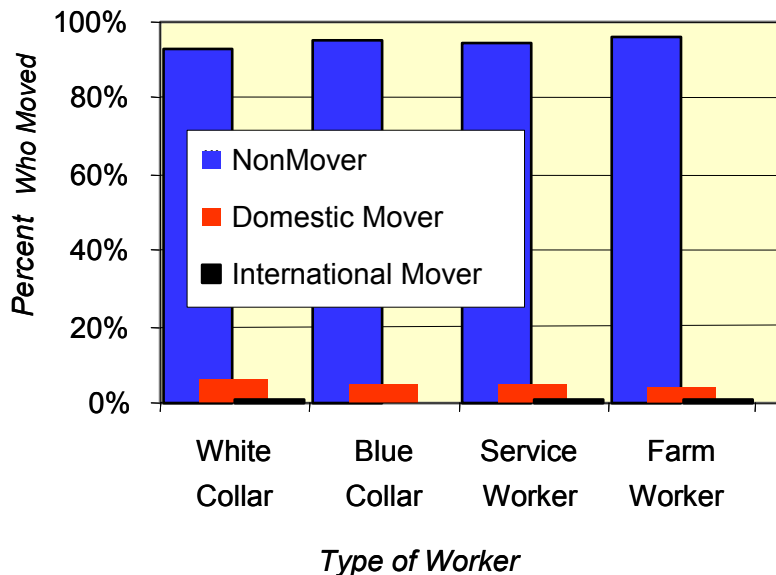
As reflected in Figure 10 below, military service entails frequent moves. For example, 32 percent of traditional military families moved across county or international boundaries between March 1998 and March 1999. This transient behavior ensues from the military utility of shifting personnel between units to satisfy near-term readiness demands and professional development requirements, and to accommodate changing national priorities and heterogeneous rates of personnel turnover. Based on these considerations, the Army, for example, moved one third of its soldiers during the past year. Many of these reassignments were structured to shift personnel from training, recruiting, and acquisition posts to combat forces with the objective of raising the readiness of under-strength divisions. In contrast, as illustrated in Figure 10 below, civilian households were less transient..

Cognizant of the mobile nature of military life, academic researchers have heretofore addressed the topic of military wives' earnings from the context of migration. That is, they have largely attributed the wage penalty suggested in Figure 3 to career interruption and the loss of jobs due to dislocation. While there is certainly a basis for this approach, it does not sufficiently account for the observed penalty. Furthermore, it does not lead to effective policy considerations within the Department of Defense, because resulting policy remedies begin with recommendations to reduce migration, which is a difficult proposition to implement

Migration-based analysis, as applied to the military, is an extension of earlier academic work. This work ensued from the increasingly migratory nature of corporate employment during the 1960s and 1970s. In a corporate setting, wives experienced wage loss and career interruption as they moved according to the dictates of their husbands' career. Within that context, couples would elect to move only if the relocation-induced wage increase garnered by the husband exceeded the wife's earnings loss. However, from the perspective of military households, migration typically has zero net effect on the service members' income. Moreover, it can be an income-reducing proposition for the civilian spouse of a service

member. Within the military, migration is not a matter of household income maximization. Rather, migration is a condition of military service.

Figure 10. *Percent of Traditional Households, with Husbands Ages 20 to 49 in the Labor Force, that Moved Across County Lines Between March 1998 and 1999*



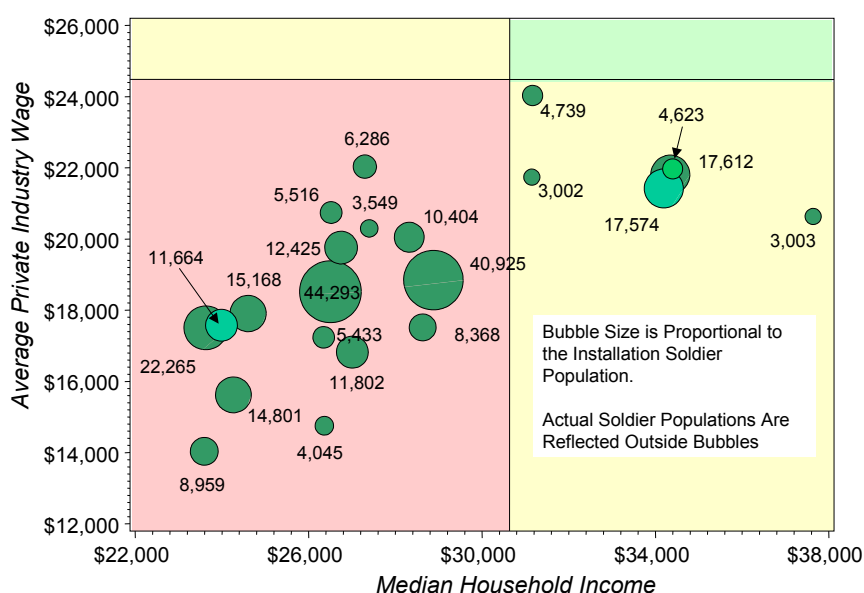
Data Source: March Supplements to the Current Population Surveys.

Based upon the disparate considerations underlying migration in civilian and military households and the difficulty of significantly reducing military migration, this analysis focuses not on the fact that migration occurs but on the location of moves. Specifically, by focusing upon the nexus between military migration and wives' employment and earnings outcomes, earlier analysis failed to account for the market conditions found in the vicinity of military installations. Migration in the military does not entail relocation between areas of economic bounty nor from depressed areas to surplus areas. Rather it typically entails moves between areas characterized by poor employment opportunities and low wages. From this perspective, permanent residence in such areas would not address the primary basis for poor employment and wage outcomes experienced by spouses of military personnel.

ARMY STATIONING PRACTICES: A CASE STUDY

A review of the geographic distribution of Army Posts within the United States finds that most garrisons are located in rural areas that are characterized by relatively low wages and household earnings. Indeed, as shown in Figure 11, average private-sector wages in Army locales are well below the national average.

Figure 11. 1992 Average Wage (U.S.=\$24,481) & Median Household Income (U.S.-\$30,636) within the County Outside Post Main Gate



Data Source: 1992 Personnel Authorization Manning Document and USA Counties, 1998

In Figure 11, the bubbles represent installations. The size of the bubbles is proportional to the share of soldiers stationed at these posts; their spatial orientation reflects economic conditions prevailing in the vicinity of Army posts. Bubbles located near the top of the graph connote posts located in areas with private sector wages that approach the national average. Bubbles near the bottom of the graph indicate posts that are located in areas with wages well below the national average. Similarly, bubbles found in the region to the right of the national median household income reference line connote posts located in areas characterized by household income above the U.S. median. From this perspective one can

see that Army posts are primarily located in areas characterized by relatively poor wage and income conditions.⁴

The homogeneity of income conditions found in the vicinity of Army posts is not surprising, given the Army's mission. Army operations entail frequent large-scale training exercises involving long-range weapons and fast moving mobile formations. Consequently, Army land use requirements are such that Army posts are not often located near thriving labor markets.

The Army's land requirements became acute in World War II: the need to train mechanized forces for overseas employment led the Army to expand its use of garrisons in the rural South, the West, and Southwest. These areas afforded large maneuver areas and favorable weather for year-round training. As a result, locales such as Fort (Camp) Stewart, Fort Riley, Fort Bliss, and Fort Hood attained growing importance as platforms for training and deploying major combat formations. During the post-Cold-War drawdown, the Army further concentrated its forces in the set of remote installations best able to accommodate the spatial requirements of mechanized warfare.

While the foregoing conditions need not rule out lucrative labor force participation among Army wives, they are not suggestive of characteristics one would seek in selecting migration destinations. Nor are these the sort of conditions envisioned in traditional economic theory as first hypothesized by J. R. Hicks as early as 1932: "...differences in net economic advantages, chiefly differences in wages are the main causes of migration."⁵

Rather, the rural-basing bias evidenced in Figure 11 may have damaging effects on Army household income. Therefore, the analysis that follows explores spouse earnings by gauging the extent to which a paucity of local economic activity impairs the employment and earnings prospects of spouses of military personnel.

LOCAL LABOR MARKETS AND MILITARY WIVES' LABOR MARKET OUTCOMES

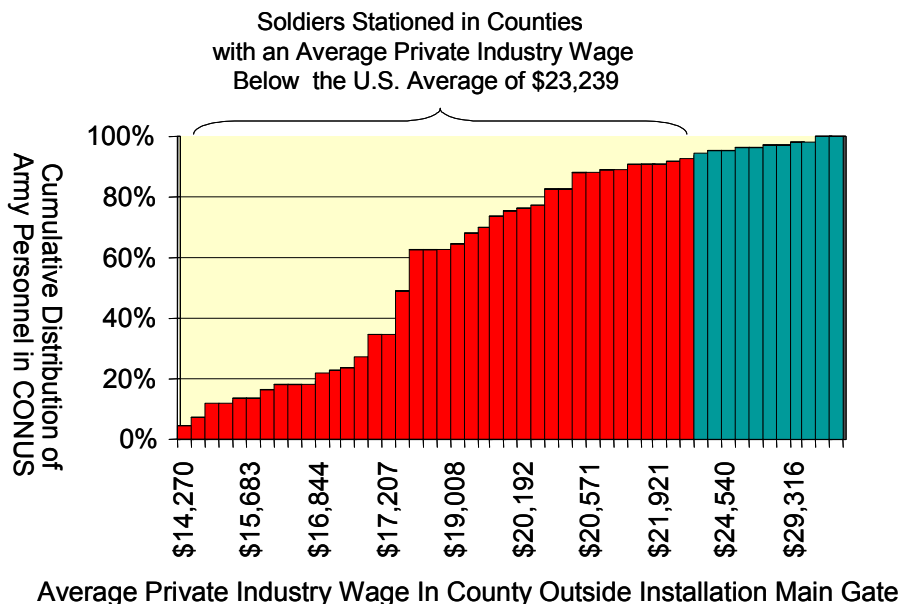
Figure 11 suggests that military wives confront employment opportunities that are distinguishably less robust than those faced by the general population of wives.

⁴ Developed from USA Counties 1998, U.S. Census Bureau.

⁵ Greenwood, M. (1975). "Research on Internal Migration in the United States: A Survey." *Journal of Economic Literature* 13(June): 397-433.

The unique employment environment confronting military wives can be seen more clearly in Figure 12, which depicts the cumulative distribution of active duty Army personnel in 1991.

Figure 12. Cumulative Distribution of Active Duty Army Personnel by Duty Station According to the Average Private Industry Wage in 1991 Within the County Outside their Duty Station Main Gate



Data Source: 1992 Personnel Authorization Manning Document and USA Counties 1998

Each bar represents an Army installation. The incremental increase in the heights of bars represents the contribution of each installation to the cumulative population of soldiers on installations in the continental United States (CONUS). The horizontal axis provides the average private-sector wage prevailing in the county adjacent to each installation. By arraying installations according to this private industry wage, one can see that the vast majority of soldiers are stationed in areas characterized by relatively low wages. While 1991 data is used for analytical purposes, the message conveyed by Figure 12 is relatively time-invariant. That is, given the relative proportions of soldiers, and therefore soldiers' wives, residing in areas with below-average wages, one can immediately abandon any assumption of random assignment of Army wives to labor markets. The wage environment confronting these wives is not only a function of their

stock of human capital and abilities, but also of military stationing requirements.⁶

From an analytic perspective, one can gauge the influence of local labor market conditions on military wives' earnings through the use of statistical techniques that control for human capital and labor supply factors as well as local labor market demand conditions.

To motivate the analysis that follows, consider the following simple model. First, assume random assignment of military couples to Department of Defense installations. Given this assumption, differences in the earnings of wives of military personnel across installations must be due to local factors. To implement an analysis of this model, reference is made to local private-sector wages in 1991 as the factor of interest.⁷

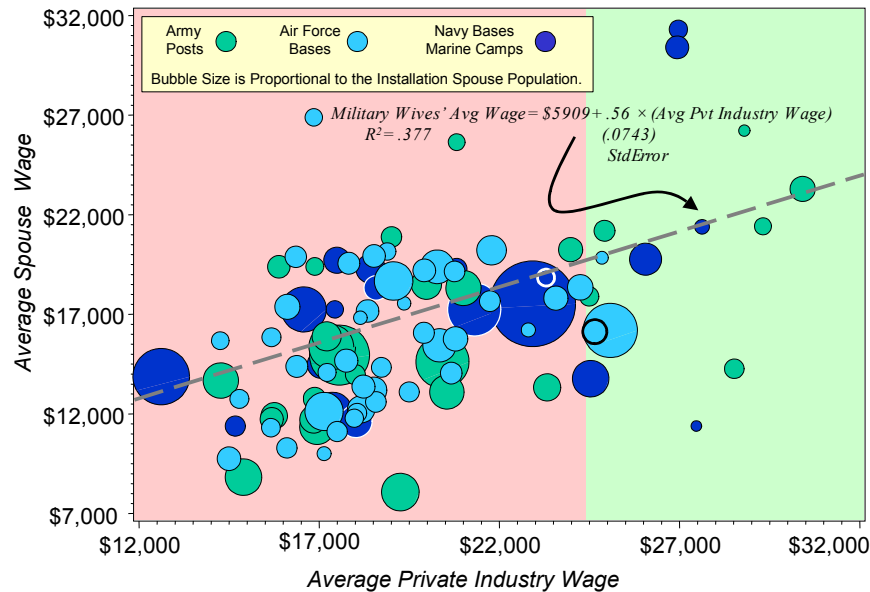
Average private-industry wages, as a proxy for local labor market conditions, explain much of the variation in wives' average wages across installations, as presented in Figure 13. Here, wives' average wages by installation are presented on the vertical axis. Average local private-sector wages prevailing in counties adjacent to these installations are presented along the horizontal axis. Each bubble represents a military installation with service affiliation denoted by the color of the bubble. Within service bubble sets (installations) bubbles are proportioned to indicate the relative size of installations in terms of their assigned married population.

As Figure 13 shows, most military installations are located in areas characterized by relatively poor wage conditions. This situation is evidenced by the location of most bubbles within the pink shaded area. That area connotes average private-sector wages reported for U.S. counties that fell below the U.S. average private-sector rate of \$23,239. Moreover, one can see that installation bubbles follow a pattern suggestive of a nexus between local wage conditions and military wives' earnings. The rising dotted regression line indicates this pattern.

⁶ Whereas many U.S. cities grew apace with trade and commerce, the Army's set of installations was accumulated to support military operations. Thus, posts such as Fort Huachuca and Fort Leavenworth were established during the Indian Wars. F.E. Warren Air Force Base was selected as a missile station out of Cold War strategic considerations.

⁷ The 1992 DoD Surveys of Officers and Enlisted Personnel and Military Spouses is the most current available source of data regarding the employment and earnings situation of wives of military personnel.

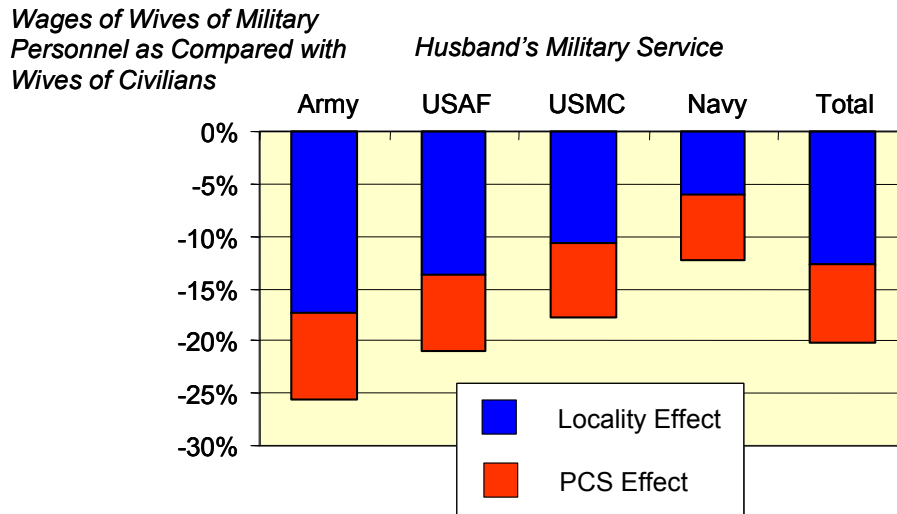
Figure 13. Average Spouse Wage by Installation & Average Private Industry Wage (\$24,481) Within the County Outside the Installation Main Gate, 1991



Further exploration of the situation using multivariate regression analysis substantiates the role local conditions play in shaping wives' labor market outcomes. Specifically, after controlling for relevant factors, including local price levels and frequency of permanent change-of-station (PCS) moves, some 63 percent of the wage penalty exhibited among wives of military personnel can be attributed to locality effects. Across services, the greatest burden of these locality effects falls, in order of scale, upon wives of soldiers, then airmen, and then Marines. Among wives of sailors the wage penalty is evenly distributed between locality effects and lost earnings due to migration. The distribution of locality and migration effects is provided in Figure 14.⁸

⁸ These figures differ from the 30-percent wage penalty discussed earlier due to differing data sources and time periods. The 30-percent wage penalty addressed previously was based upon 1995 through 1999 Current Population Survey Data that did not include overseas personnel. The figures provided above are based upon 1992 DoD Survey data that did include overseas personnel but did not include a civilian comparison group. Therefore, they entailed indirect comparisons of military and civilian wives' wages using military wives' wages in San Diego as a proxy for average civilian wives' wages. San Diego was selected as the proxy due to the fact that wages

Figure 14. Earnings Penalty Exhibited by Wives of Military Personnel Within Military Services



Data Source: 1992 Active Duty Surveys of Officers, Enlisted Personnel and Military Spouses

Based upon the foregoing analysis, one could expect that a 50 percent reduction in PCS moves would only yield a 5- to 6- percent reduction in the aggregate wage penalty exhibited among wives of military personnel.

Before leaving the topic of locality effects on military wives' earnings, a brief discussion of cost-of-living considerations is in order. First, one might assume that the lower earnings garnered by military wives are offset by a lower cost of living in low-wage locales. Such assumptions do not, however, reflect the realities of the military compensation situation. For example, housing, food, transportation, personal insurance, and health care constitute 80 percent of typical household expenditures. Of these, housing price levels are likely to exhibit the highest degree of variability across labor markets.

For military families, housing allowances are tied to local markets so that families in high- cost areas receive far higher allowances than do families in low-cost areas. Indeed, housing allowances are structured to account for housing price variability. Additionally, in many instances, housing is provided in kind rather than in cash. This policy further

among wives in San Diego were very close to the national average and military wives in San Diego garnered wages comparable to civilian wives surveyed in the Current Population Survey.

reduces the potential that savings on housing expenses can act as an offset to any locality-induced wage penalty.

With regard to food expenses, Department of Defense policy can actually run against the notion of lower living costs offsetting wives' lower wage earnings. Specifically, by policy, military families can purchase groceries in DoD commissaries at cost plus 5 percent. However, the Defense Commissary Agency establishes the price of items that are not nationally branded using 25 pricing zones. Across these zones, transportation and distribution costs can result in military families paying different prices in different regions. Consequently, due to the contribution of higher transportation and distribution costs, military families in rural, low-wage areas can actually face higher food costs than military families in urban areas, which are characterized by relatively high wages.

Finally, from a statistical perspective, there is no basis to assert that low price levels explain, and therefore offset, the wage penalty exhibited by military wives due to locality effects. Indeed, within the framework of multivariate regression analysis, one finds that military wives' continue to exhibit a substantial wage penalty after controlling for local price levels.

IMPROVING LABOR MARKET OUTCOMES: POLICY ALTERNATIVES

As demonstrated, wives of military personnel incur a substantial wage penalty as compared to their contemporaries married to civilians. Moreover, this penalty increases with educational attainment. Wives earn about 40 percent of total household income in civilian households; these earnings thus represent an important contribution to household welfare. In the case of military households, a substantial increase in RMC would be required to offset the wage penalty borne by military wives. For military wives with a Bachelor's degree, such an offset would amount to 12 percent of their husbands' RMC.

Of course, increasing military pay to offset lost spousal earnings would be a poor substitute for solutions that address the basis for these lost earnings. First, many military wives elect to work within the home rather than entering the labor force. Consequently, these wives do not suffer a wage penalty. Providing a compensatory military pay increase, in these cases, would be inefficient and inequitable. Additionally, such a policy would fail to account for intangible aspects of employment sought by

military wives who enter the labor force. When surveyed, 88 percent of civilian spouses of military personnel reported that earnings from work contributed to their self-esteem.⁹ Ninety-three percent reported that full-time employment contributed to their career aspirations.

From the perspective of national output and welfare, policies should be directed toward reducing barriers that engender the wage and employment penalty experienced by spouses of military personnel. Absent such policies, these spouses will continue to create less national output, pay fewer taxes, and generate less wealth than they would if they were married to a civilian. From this perspective, a compensatory increase in RMC should not be the starting point in addressing the earnings and employment penalty incurred by wives of military personnel.

With regard to the transient nature of military service, migration clearly impairs the labor market outcomes of spouses of military personnel. However, as previously discussed, the effect of such migration is relatively moderate when compared with locality-based effects. Migration is not the principal labor market challenge facing spouses of military personnel stationed within areas characterized by poor employment opportunities and low wages.

THE FEDERAL EMPLOYMENT EARNINGS PREMIUM

Civil service employment policies may be a logical point of departure in attempting to reduce the wage penalty experienced by spouses of military personnel. Each of the services currently employs large numbers of civilian personnel. Since military wives experience relatively low earnings and depressed employment prospects due to their affiliation with the military, employment of these spouses by the military may offer substantial benefits to military households while furthering defense and national objectives. As a case study, the analysis that follows explores the efficacy and feasibility of increasing employment of military spouses within the Department of the Army.

Department of the Army civilian employment consists of appropriated- and non-appropriated-fund positions. Because appropriated-fund positions entail higher wages, greater career opportunities, and are more numerous

⁹ 1992 DoD Survey of Military Spouses.

at major troop installations, the analysis that follows focuses on these positions.¹⁰

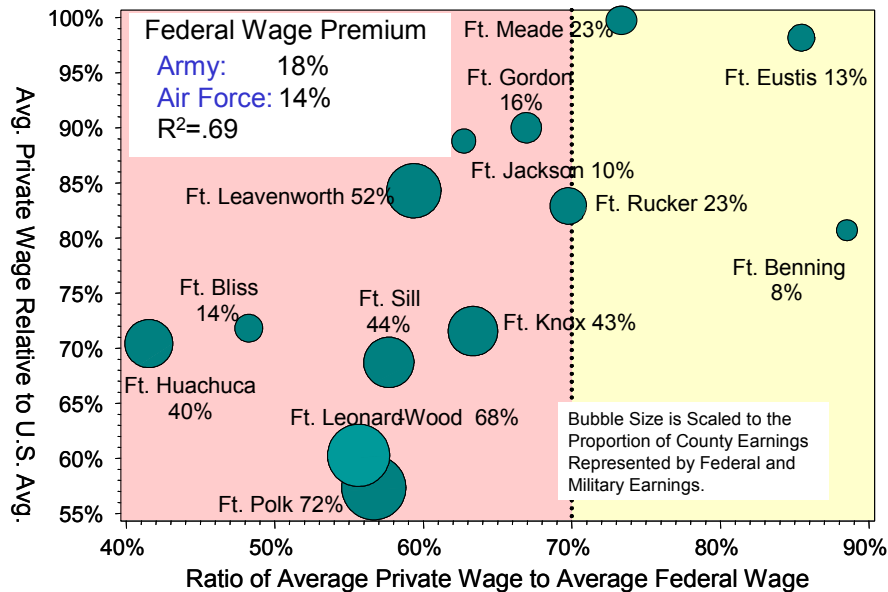
As of the beginning of FY 2000, the Army employed 203,095 civilian personnel in appropriated-fund positions. Of these employees, 139,330 were collocated on major installations with large numbers of active component soldiers. Only 8,800, or 6 percent, of these employees were spouses of soldiers. Given this situation, there is considerable potential to expand Army employment of soldiers' spouses. There is also reason to believe that employment by the Army would significantly raise the earnings of military spouses. Regression analysis of spouse earnings indicates that spouses who are currently employed full time in the federal civil service earn 18 percent more than Army spouses with other sources of full-time earnings. This statistic suggests that the Army could close much of the wage penalty exhibited among soldiers' spouses by affording them greater entrée to federal employment.

Figure 15 illustrates the benefits of federal employment from a local perspective. In this figure, the horizontal axis indicates the ratio of local private-sector wages to local federal-sector wages. The vertical axis indicates the ratio of local private-sector wages to the average private-sector wage for the United States as a whole. Here, local wages refer to average federal-or-private-sector wages within the counties in which Army installations are located. The size of installation bubbles indicates the proportion of earnings in the local county that are derived from federal civilian and military wages. In the case of Fort Huachuca, for example, the average private-sector wage is 58 percent lower than the average federal wage and 30 percent lower than the U.S. average private-sector wage. Additionally, federal civilian and military wages account for 40 percent of all wages in the county in which Fort Huachuca is located.

As indicated above, by moving from private-sector employment to federal employment, spouses of soldiers at Fort Huachuca could anticipate a substantial increase in earnings. This increase is a result of the way in which federal wages are set. Aside from locality adjustments, federal wages are set forth in a pay table that applies uniformly across federal service regardless of location. Thus, in areas of relatively poor wage conditions, federal civil service is likely to offer relatively lucrative compensation.

¹⁰ For example, at the Army's most highly populated post, Fort Bragg, there are 8,700 appropriated and 932 non-appropriated- fund civilian positions.

Figure 15. Ratio of Local Wages to Federal Wages and the Average U.S. Wage



Source: USA Counties 1992 and 1992 DoD Survey

Unlike private-sector employment, federal employment is governed by regulations that present substantial barriers to entry. These procedures are set forth in Title 5 of the Code of Federal Regulations (5 CFR). Executive Order 12721 provides for partial relief from 5 CFR requirements. This order allows the military services to provide priority employment to civilian spouses who are authorized to accompany their military spouse during overseas assignments. The appropriated-fund employment rates exhibited by Army spouses overseas and within the United States demonstrate the efficacy of this exception to 5 CFR appointment practices. In Europe, spouses of soldiers occupy 23 percent of the approximately 13,000 appropriated-fund positions. In contrast, spouses of soldiers compose only 4 percent of appropriated-fund positions on major Army installations in the United States.

Unfortunately, the operation of E.O. 12721 is far from complete in terms of enhancing spouses' entrée to federal employment upon their return to the United States. Though overseas employment under E.O. 12721 does afford spouses returning to the United States non-competitive appointment status, such status still leaves spouses well down the list for

reappointment due to the operation of preferences for groups such as veterans, displaced workers, and noncompetitive transfers. The law states:

selection may be made of noncompetitive Army candidates, VRA appointments, appointments of 30% or more disabled veterans, noncompetitive transfers, placements to correct equal employment opportunity deficiencies, placement of the handicapped, and placements of persons returning from overseas tours of duty, without regard to spouse preference.¹¹

Consequently, only 1,980 spouses of active duty soldiers now employed by the Army were selected while using this preference program. It is clear that the Department of Defense will require new authority with considerable hiring discretion if the services seek to improve the earnings prospects of military spouses through appropriated-fund employment.

Aside from the obvious benefits to Army households, appropriated-fund employment of soldiers' spouses could also accrue substantial benefits to the Army and the Treasury. The gains would arise through savings in health benefits afforded to federal employees and through the collection of income taxes on the incremental earnings of spouses employed in federal civil service.

With regard to the first point, the military offers subsidized health benefits to non-temporary employees under the Federal Employees Health Benefit Plan (FEHBP). Currently, the government cost-share of this benefit is \$2,529 per enrolled employee.¹² Among Army employees who are not married to an active duty soldier, 89 percent participate in the plan. In contrast, only 19 percent of soldiers' spouses working as Army civil servants avail themselves of this benefit.¹³ At these rates of usage, the expected average FEHBP cost for the spouse of a soldier would be \$557, while the expected average cost for the spouse of a civilian would be \$2,610. Assuming stable FEHBP participation, employment of soldiers' spouses would net the Army approximately \$2,000 in expected benefits savings per spouse employed. Since employment is only offered to fully

¹¹ Office of Personnel Management (1999). Title 5 Code of Federal Regulations, Administrative Personnel. Washington, D.C., U.S. Government Printing Office.

¹² Office of Personnel Management (1999). OPM Financial Management Letter F-99-03, dated February 5, 1999, Health Benefit Cost Factor. Washington, D.C.

¹³ The basis for this low take-rate can be found in the fact that federal employees bear about 30 percent of the cost of the FEHBP while all spouses of soldiers enjoy health coverage under various military health care programs by virtue of their marriage to a soldier. Also, in the vicinity of many installations, military health services are more convenient than care available from civilian providers under FEHBP.

qualified applicants, under the provisions of 5 CFR, there should be no incremental training cost associated with such a strategy.

Moreover, there is substantive reason to expect that spouses of military personnel embody skills that are well matched to job requirements. Recall that soldiers' spouses occupy 23 percent of Army civilian positions in Europe.¹⁴ As installations in Europe engage in many of the same activities entailed in operating posts in the United States, there is reason to believe that rates of Army spouse employment in the United States could mirror those found in Europe.

Army employment of soldiers' spouses would also benefit the United States Treasury through increased tax receipts. If one assumes a 15 percent tax rate and 18 percent increase in spouse earnings, income tax payments from spouses gaining employment in appropriated-fund positions would rise by approximately 3 percent, or \$360 on a base of \$12,000. Thus, the net change in the federal cost associated with hiring the average soldiers' spouse would be a \$2,413 saving.

Of course, from the perspective of other federal employment aspirants, policies directed toward increasing federal employment of soldiers' spouses will decrease federal employment opportunities. That is, the number of positions available in Army civil service is relatively fixed. Therefore, each spouse of a service member who gains federal employment reduces federal employment opportunities available to job aspirants in civilian households. Thus, spouse employment policies may lead to civilian unemployment or underemployment in the vicinity of some posts during a period of labor market adjustment. Since civilian households are free to relocate to more lucrative job markets, however, any burden associated with this adjustment should be transitory. In contrast, spouses of military personnel cannot relocate to better job markets while maintaining an intact military household. Thus, their forgone employment and earnings are not transitory and will persist as long as they are stationed in areas characterized by poor labor markets. Consequently, affording spouses of soldiers enhanced labor market opportunities through federal employment can be beneficial from a national perspective.

It is possible to craft federal employment practices so as to minimize the burden of an enhanced spouse hiring authority on the existing civilian workforce. That is, rather than separating existing workers, the services could employ a policy of replacement through attrition. Spouses of

¹⁴ Department of the Army (1999). Civilian Personnel Master File, Headquarters Army Civilian Personnel System,. 1999.

military personnel could be added to the federal payroll as existing workers retire or leave federal employment. Within the Army this policy would generate federal employment opportunities for 20,000 to 26,000 spouses over the next five years. From a stakeholders' perspective, these spouses could be members of the federal employees union and would thus not materially affect union membership rolls.

ENHANCING SPOUSE EARNINGS THROUGH CONTRACTING POLICY

In addition to employing large numbers of civilians as civil servants, the military services contract with a wide variety of firms for services ranging from communications support to dry cleaning. For example, during 1999, the Army let more than \$60 million in service contracts at Fort Polk. The majority of these contracts were awarded under competitive bidding procedures. Borrowing a page from 1970's-era employment programs such as the New Jobs Tax Credit and Targeted Jobs Tax Credit, there is precedent to expand contractor employment of military spouses in such competitive bidding situations.^{15,16}

As a matter of policy, the services could provide contractors an employment subsidy for each wife or husband of a service member they employ after winning a competitive bid contract. Such a policy should have the effect of increasing the private-sector employment of military spouses at little or no cost to the government. To the extent that military spouses are as productive as local civilian labor, there should be little to no incremental cost to contractors associated with employing these spouses rather than local civilian labor. Thus, a spouse employment subsidy would pass directly to a firm's bottom line as profit.

In a competitive bidding setting, contractors could lower their bids by the amount of the subsidy that passed to profits. Therefore, the entire subsidy could return to the government in the form of lower contractor bids. At the same time, of necessity, contractors would take maximum advantage of such a subsidy so as to gain the competitive bidding advantages entailed therein.

¹⁵ Perloff, J. and M. Wachter (1979). "The New Jobs Tax Credit -An Evaluation of the 1977-78 Wage Subsidy Program." *American Economic Review* 69(May): 173-179.

¹⁶ Bishop, J. H. and M. Montgomery (1993). "Does the Targeted Tax Credit Create Jobs at Subsidized Firms?" *Industrial Relations* 32(Fall): 289-306.

APPLYING TECHNOLOGICAL INNOVATIONS TO EXPAND LABOR MARKETS

To further overcome the untoward effects of local labor markets on the earnings of spouses of military personnel, the services could draw upon innovations in e-commerce. Specifically, following the business model of firms such as Commerce One and Ariba Inc., the services could launch pilot projects to leverage the Internet as a vehicle to expand the scope of labor market opportunities to military spouses using Web-based reverse auctions. Given the shortage of skilled labor now evidenced in the economy, excess labor demand could be matched to excess spouse labor supply through reverse auctions in the Web-based marketplace. Targeted industries could include publishing, telemarketing, and computer software development where transportation and communications constitute minuscule components of production costs.

STATIONING PRACTICES

As another means of improving the labor market opportunities and earnings potential of military spouses, the services could reexamine the basis for retaining installations in remote areas. Heretofore, the services have stationed many of their personnel in remote areas that provided expansive training facilities. However, trends suggest that within the foreseeable future, weapons lethality, range, and speed of movement will exceed the terrain capacity of all but a handful of installations. Additionally, the prohibitive cost of maneuver and weapons training has led to a marked substitution of virtual training environments for traditional training methods. This trend is likely to persist, and perhaps accelerate, as new weapon systems enter the inventory.

Given these advances, it is possible to envision a dual-station operating environment. In this environment, general-purpose forces would be garrisoned in the vicinity of urban and suburban areas that afford robust labor demand for soldiers' spouses, robust housing markets, and a wide array of recreational and cultural activities. By imbedding their garrisons in well-developed markets and communities, the services could divest themselves of nonmilitary functions entailed in stationing forces in remote locations. These functions range from operating movie theaters and bowling alleys to building and maintaining housing stocks. In such urban and suburban garrisons, military personnel could employ simulations to master individual and team skills. At appropriate intervals, deployments to expansive areas in the West would sustain collective skills.

POLICIES REGARDING HOME BUSINESSES

The military services currently regulate home businesses operated on military installations. While this regulation can preclude unsafe or unscrupulous practices, it can also impose significant barriers to entrepreneurial activity by spouses. For example, paragraph 2-4 of AR210-7 addresses licensing requirements for spouses seeking to operate businesses on Army installations. Because AR210-7 requires spouses to obtain a license from local municipal or state authorities, its provisions essentially require a spouse to secure a new license each time military requirements engender a PCS move. This situation can be quite burdensome for spouses in occupations such as interior design, cosmetology, hairstyling, manicure, massage therapy, bodywork and somatic therapy, athletic training, landscape architecture, and speech therapy. Given that these occupations are highly portable, they would seem to be ideally suited to the migratory nature of military service. Additionally, they fall within fields that are not well served by on-post agencies under the license of which spouses could gain employment.

Since licensing requirements vary widely among states and cities, the requirement to secure a local license can entail significant costs in terms of testing, additional training to satisfy local requirements, and lost wages pending licensure. Whereas occupations such as insurance sales would continue to be covered under separate regulatory provisions, licensure of home businesses for occupations such as those identified above could be accomplished by simply requiring evidence of prior licensing by any licensing authority. As many locales appear to require that practitioners operate their businesses within the confines of the licensing jurisdiction in order to renew their licenses, the services could avoid a requirement for spouses to keep state or local license current in order to operate a business on a military installation. Alternatively, as the number of occupations requiring licensure continues to grow, the services could seek special status for spouses of military personnel so that their credentials enjoy national standing.

CONCLUSIONS

Wives of military personnel incur a substantial wage penalty and enjoy markedly reduced employment prospects when compared to their contemporaries married to civilians. These outcomes can be attributed to factors endogenous to military service. An exploration of these endogenous military conditions does indicate the operation of a moderate earnings penalty due to migration. However, analysis of earnings and employment across military services finds that much of the wage penalty borne by wives of military personnel can be attributed to local labor market conditions. Analysis of these conditions across installations demonstrates that the four military services occupy distinguishably different pieces of economic real estate. Specifically, the Army, and in many instances the Air Force, operate in areas characterized by relatively poor labor market conditions. To a lesser extent this situation also affects wives of Marines and sailors. To redress this situation, the services can employ a mix of policy alternatives ranging from direct employment of service members' spouses to adjustment of operating practices and policies.